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WATER SUPPLY OUTLOOK FOR OREGON



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

OREGON DEPARTMENT OF WATER RESOURCES

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
MAR. 1, 1977

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SNOW COURSE MEASUREMENTS BY A SURVEY TEAM IN UTAH'S WASATCH RANGE.
ORC-254-10

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, 6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia





You may have less Irrigation water this year than ever before.

SNOW COURSE MEASUREMENTS MADE ON MARCH 1, 1977 CONTINUE TO INDICATE THAT MANY AREAS WILL HAVE SEVERE TO CRITICAL WATER SHORTAGES. STUDY THE ATTACHED WATER SUPPLY FORECAST CAREFULLY FOR STREAM FLOW AND/OR RESERVOIR STORAGE FIGURES THAT CONCERN YOUR AREA. KEEP IN TOUCH WITH YOUR IRRIGATION DISTRICT OR OTHER OFFICIALS FOR ESTIMATES OF THE SUPPLY AVAILABLE FOR YOU. YOU MAY FIND YOU'LL NEED TO CHANGE CROPS, PLANTED ACREAGE, TIMING OF WATER APPLICATION OR EFFICIENCY OF YOUR WATER DISTRIBUTION SYSTEM. THESE ARE SOME OF THE EARLY DECISIONS AND PLANS YOU MAY HAVE TO MAKE:

1. Change to crops which require less water.
2. Reduce the crop acreage. Naturally, this will affect the fertilizer you order and the amount of seed you buy. Be sure unplanted land has cover crops to prevent wind erosion.
3. Check out your irrigation systems carefully. Make certain that ditches have no water-wasting weeds or debris to slow delivery; that sprinkler heads don't have leaks, pipes have tight connections and pumps work properly. If new parts or equipment are needed, purchase them soon.
4. Plant only the best land - it makes most efficient use of water. If your soil has been mapped, local Soil Conservation Service personnel can guide you. If not mapped, they can still give you general information.
5. Maintain close contact with the Soil Conservation Service or your local Conservation District for the latest water supply forecasts, and for soil information. SCS has just published water conservation TIPS pamphlets for irrigators, farmers and ranchers. Get copies.
6. Maintain close contact with the Agricultural Stabilization and Conservation Service county office. Funds for cost sharing on special water stretching practices may be made available because of the drought situation. ASCS also administers the Federal Disaster Assistance program.
7. Do the same with your closest Farmers Home Administration office. Special loans may become available.
8. Do the same with the local Cooperative Extension Service office for current information on crops, feed supply and marketing.

SCS, ASCS AND FMHA ARE LISTED IN THE PHONE BOOK UNDER "U.S. GOVERNMENT, AGRICULTURE, DEPARTMENT OF." THE EXTENSION SERVICE IS USUALLY LISTED WITH LOCAL COUNTY OFFICES.

WATER SUPPLY OUTLOOK FOR OREGON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MARCH 8, 1977

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In Cooperation with

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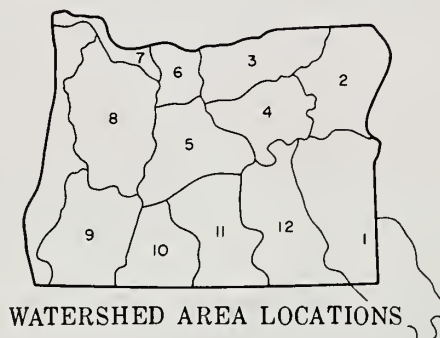
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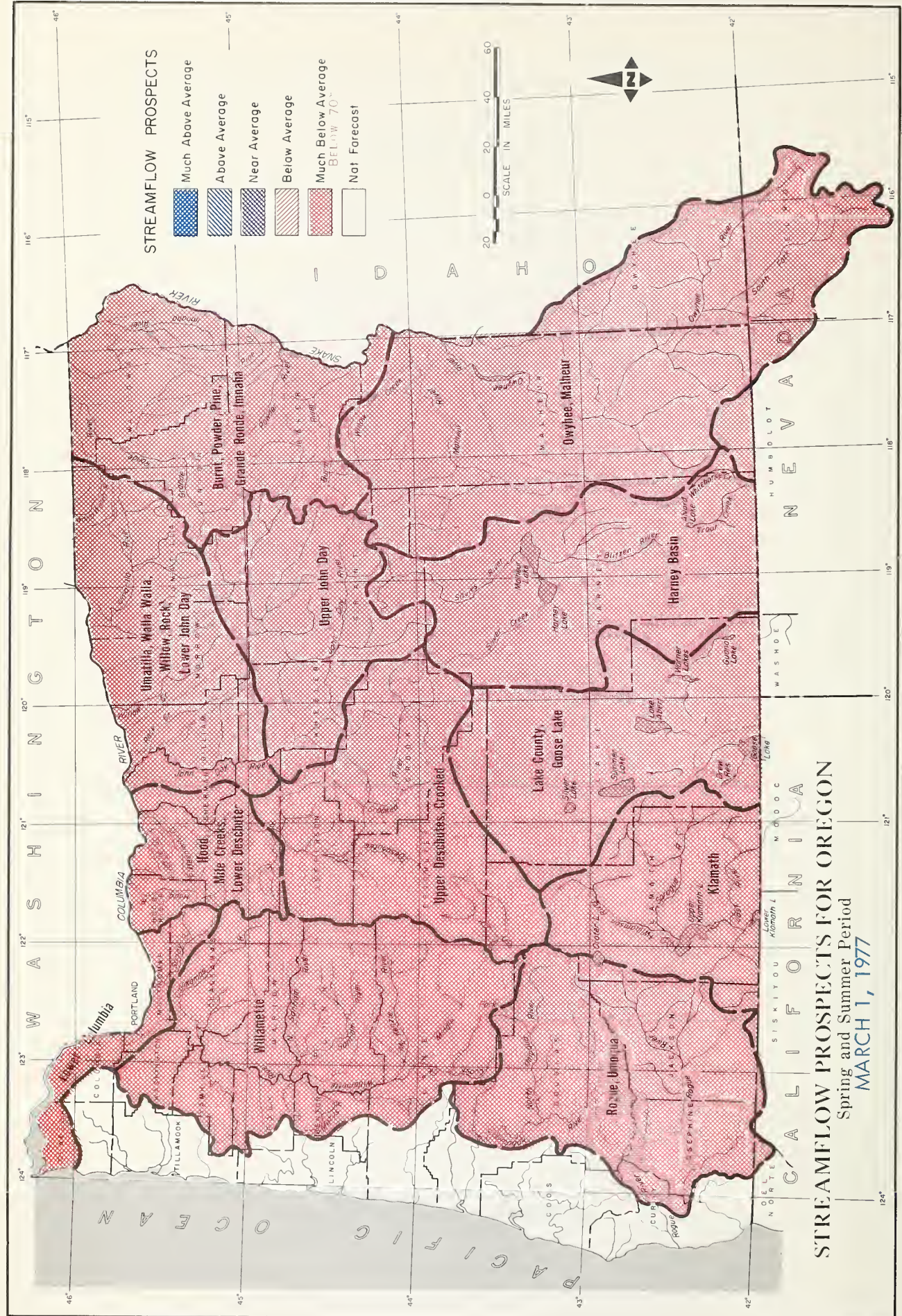
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WATER SUPPLY OUTLOOK for OREGON

MARCH 1, 1977

The water supply outlook for Oregon is generally very poor. Only in areas with access to stored water will some users have normal supplies. The mountain snowpack is still at record low levels. Precipitation this past month was below normal. Reservoir storage is generally close to normal, however, many reservoirs will not fill.

SNOW COVER

The mountain snowpack is still at record low levels. Fifty-one snow courses reported new minimum-of-record March 1 measurements. Warm temperatures during the first three weeks caused a loss of water content at most snow courses. The storms during the last week of February had to make up this loss before increases could be recorded in the snowpack for March 1. The snowpack now ranges from a low of 2% of normal on Bully Creek in Eastern Oregon, to a high of 37% on McKay Creek near Pendleton, Oregon.

PRECIPITATION

The dry trend Oregon has been experiencing since last September, continued through February. The Willamette Valley recorded the most precipitation during the month, at 63% of normal. Precipitation over the rest of the state varied from 28% of normal in Lake County, to 62% in the North Central part of the state.

SOIL MOISTURE

The soils are still very dry beneath the snowpack and will absorb more than normal amounts of snowmelt water.

RESERVOIR STORAGE

Twenty-six principal irrigation reservoirs were storing 1,970,000 acre feet of water. This compares to the normal of 2,065,000 acre feet for March 1. Many reservoirs will not fill, however, and this will cause water shortages for many irrigators.

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STREAMFLOW

Streamflow this past month continued at low levels on most streams throughout the state.

Expected flow during the April-September period for representative streams are as follows:

<u>STREAM</u>	<u>Percent of Normal</u>
Owyhee Net Inflow	18
Malheur Near Drewsey	15
Deschutes at Benham Falls	69
Grande Ronde @ LaGrande	42
Willamette, Mid. Fk. Near Oakridge	48
Klamath Lake Net Inflow	42
Rogue at Raygold	59
Silvies Near Burns	20
John Day, Mid. Fk. Near Ritter	35

This report contains data furnished by the Oregon Department of Water Resources, U. S. Geological Survey, NOAA National Weather Service and other cooperators.



WATER SUPPLY OUTLOOK

OWYHEE, MALHEUR WATERSHEDS

OREGON

GENERAL OUTLOOK

This area received 46% of normal precipitation for the month of February but snowpack water is still only ranging from 13-24% of average. Spring and summer streamflow is forecast to be 15-20% of average. Reservoir storage is near average for this time of year, but future inflow will be low, which means reservoirs will not fill. Water shortages will occur for many users. Net inflow to Owyhee Reservoir was only 24% of average for February.



STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Bully Creek at Wamsprings	2.0	15	Mar.-May		13.9
Malheur near Drewsey	14.1	15	Mar.-July		94
	10.8	15	Apr.-Sept.		72
Malheur, North Fork at Beulah	10.8	15	Mar.-July		72
	9.6	15	Apr.-Sept.		64
Owyhee Reservoir net Inflow	102	20	Mar.-July	631	431
	60	18	Apr.-Sept.	510	332

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000 250	Apr. 15 May 1	May 24 June 20

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Antelope	70.0	No Rpt.	--	16.7
Beulah Reservoir	60.0	28.2	31.1	30.8
Bully Creek	30.0	13.7	18.9	15.6
Owyhee	715.0	505.0	680.9	451.2
Warmsprings	191.0	83.4	138.3	96.5

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Malheur River	1	--	59
Owyhee River	2	103	62

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Jordan Creek	4	27	24
Malheur River	5	12	13
Owyhee River	5	23	22

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

OREGON

GENERAL OUTLOOK

This area received about half its normal February precipitation. Snow-pack water ranged from 18 to 24% of average on the major drainages. Major reservoirs have near average storage but later inflow will be much below average. Streamflow is forecast to range from 20% to 64% of normal. Water users should plan on below normal supply. The Grande Ronde River at LaGrande had only 9% normal flow during February.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORCAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Bear near Wallowa	34	51	Apr.-Sept.		66
Burnt near Hereford	8.4	20	Mar.-July		42
	6.6	20	Apr.-Sept.		33
Catherine near Union	32	49	Apr.-Sept.		65
Eagle Creek abv. Skull Creek	54	31	Apr.-July		175
	64	33	Apr.-Sept.		190
Grande Ronde at La Grande	73	38	Mar.-July	270	193
	66	42	Apr.-Sept.	239	158
Hurricane near Joseph	30	64	Apr.-Sept.		47
Imnaha at Imnaha	135	44	Apr.-Sept.		307
Lostine near Lostine	72	58	Apr.-Sept.		125
Powder near Sumpter	17.0	31	Apr.-July		55
	17.9	32	Apr.-Sept.		56
Wallowa, East Fork near Joseph	7.7	63	Mar.-Sept.		12.2
	6.9	60	Apr.-Sept.		11.4
Wallowa @ Joseph	42	55	Apr.-July		76
Wolf Creek net Inflow	1.5	12	Mar.-June		13.3

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Phillips Lake	73.5	45.7 ^a	60.3	--
Thief Valley	17.4	17.4 ^a	17.4	17.3
Unity	25.2	13.7	14.4	14.0
Wallowa Lake	37.5	25.2	26.8	22.3
Wolf Creek	10.4	7.2	--	--

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Burnt River	4	18	18
Grande Ronde River above La Grande	4	18	23
Powder River	5	20	20
Wallowa, Imnaha, Catherine Creek	6	25	24

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Burnt, Powder	1	53	61
Grande Ronde, Catherine Creek, Imnaha River	3	86	81

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year	Average ^c
Birch Creek at Rieth	8.8	40	Mar.-July		22
	5.3	33	Apr.-Sept.		16.0
McKay near Pilot Rock	7.9	33	Apr.-July		24
	8.2	34	Apr.-Sept.		24
Umatilla near Gibbon	53	55	Mar.-Sept.		97
	37	50	Apr.-Sept.		75
Umatilla at Pendleton	104	52	Mar.-Sept.		200
	72	50	Apr.-Sept.		144
Walla Walla, South Fork near Milton	59	75	Mar.-Sept.		79
	50	75	Apr.-Sept.		66
Butter Creek near Pine City	3.4	30	Mar.-July		11.4

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton	550	April 1	May 22

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Cold Springs	50.0	16.2	39.5	41.4
McKay	73.8	14.0	52.5	40.2

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Umatilla, Walla Walla, McKay Creek	3	78	80 .

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
McKay Creek	3	29	37
Umatilla River	3	12	17
Walla Walla River	2	8	12

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

UPPER JOHN DAY WATERSHEDS

OREGON

GENERAL OUTLOOK

Precipitation for February was 56% of average in this area. Snow water equivalent is ranging from 14 to 27% of average. Most streams are forecast to have discharges of 30 to 35% of normal. Water users can expect much lower than normal water supply. John Day River at Service Creek had a February flow of only 14% of normal.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Camas Creek near Ukiah	14.0	30	Mar.-July		43
	10.0	33	Apr.-Sept.		33
John Day, Middle Fork at Ritter	46	36	Mar.-July		129
	38	35	Apr.-Sept.		108
John Day, North Fork at Monument	232	36	Mar.-July		646
	189	35	Apr.-Sept.		540
Strawberry near Prairie City	4.1	57	Mar.-July		7.2
	4.2	56	Apr.-Sept.		7.6

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
John Day above Dayville	3	77	76
John Day, North Fork	1	--	73

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
John Day, North Fork	7	27	27
John Day abv. Dayville	5	14	14

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

UPPER DESCHUTES, CROOKED WATERSHEDS

OREGON

GENERAL OUTLOOK

Area precipitation was 41% of average for February. The snowpack was only 12% to 16% of normal water equivalent. Major reservoirs are near or above average storage, but streamflow forecasts range from only 15% to 69% of average, indicating low water supplies in some areas. February streamflow of the Deschutes River at Moody was 66% of normal.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Beaver Creek near Paulina	3.8	15	Mar.-July		25
	2.4	15	Apr.-Sept.		16.0
Crane Prairie Reservoir total Inflow	48	40	Apr.-Sept.		119
Crescent at Crescent Lake	6.7	33	Mar.-July		21
	7.0	31	Apr.-Sept.		22
Crooked near Post	26	20	Mar.-July		135
	18.1	20	Apr.-Sept.		91
Deschutes at Benham Falls	240	67	Apr.-July		360
	380	69	Apr.-Sept.		550
Deschutes below Snow Creek	28	40	Mar.-Sept.		69
	25	40	Apr.-Sept.		62
Deschutes, Little near La Pine	23	26	Mar.-July		88
	20	25	Apr.-Sept.		82
Ochoco Reservoir net Inflow	5.0	18	Mar.-July		27
	3.4	18	Apr.-Sept.		18.8
Odell near Crescent	14.8	53	Apr.-Sept.		28
Squaw near Sisters	29	56	Apr.-Sept.		50
Tumalo near Bend	28	63	Apr.-Sept.		44
Deschutes at Bend	150	--	Aug.-Sept.		--

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second. Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow	300	*	July 15
Crooked R. near Post	100	Apr. 15	June 1
Deschutes at Bend	1500	*	July 1
Little Deschutes near La Pine	400	**	June 7
	200	**	July 8
* Issued April 1.			
** Will not reach 200 cfs.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Crane Prairie	55.3	45.1	55.9	43.4
Crescent Lake	86.9	69.6	84.4	48.3
Ochoco	47.5	24.7	36.9	25.6
Prineville	153.0	96.1	110.2	112.4
Wickiup	200.0	190.7	190.1	168.7

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Crooked R., Upper Deschutes River	2	77	71

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Crooked, Ochoco	4	14	16
Deschutes abv. Wickiup	3	11	13
Little Deschutes	4	12	14
Tumalo & Squaw Crs.	3	10	12

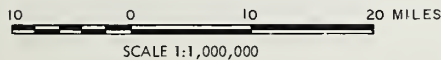
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

HOOD, MILE CREEKS, LOWER DESCHUTES
WATERSHEDS .

OREGON

GENERAL OUTLOOK

Snowpack water is only about 20% of normal. February precipitation was 48% of average. Clear Lake reservoir has above average storage. Stream-flow forecasts are for discharges of 35% to 60% of average. Water supplies will be below normal.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Hood, West Fork near Dee	80	61	Apr.-July		132
	95	62	Apr.-Sept.		154
White below Tygh Valley	41	35	Apr.-July		118
	56	42	Apr.-Sept.		133

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	* 20	July 15-31	**39
* Average cfs forecast to flow for this two-week period. ** Average cfs for period of record.			

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Clear Lake (Wasco)	11.9	6.2	10.5	3.1

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Hood River	5	19	21
Mile Creeks	3	14	19
White River	1	20	19

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

LOWER COLUMBIA WATERSHEDS

OREGON

GENERAL OUTLOOK

Surface water supply in the Lower Columbia River area will be below normal. Precipitation was much below normal throughout the Columbia basin, ranging from 25% on the Upper Snake, to 65% in Western Oregon and Washington. The Columbia basin snowpack is 40% of normal. The Columbia at The Dalles, is forecast to flow a historical low volume of 53,000,000 acre feet during the April-September period.



SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Sandy River	2	14	18

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Columbia at The Dalles	31,500	43	Apr.-June		73,160
	53,000	51	Apr.-Sept.		104,426
Sandy River near Marmot	189	55	Apr.-July		343
	227	57	Apr.-Sept.		398

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW ^d (1,000 A F)			REGULATED PEAK (1,000 cfs)	DATE
	APR - SEPT.	APR - JUNE	MAY - JUNE		
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1968	89,000	55,500	47,900	404	June 13
1969	112,300	85,700	63,800	515	May 15
1970	88,100	62,800	55,200	425	May 28
1971	122,900	88,400	73,700	557	May 13
1972	134,700	96,400	81,400	619	June 20
1958-72 Avg.	104,300	72,900	59,900	529	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu)	FLOW AT THE DALLES (1,000 cfs)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Estimated (b) 1958-72 adjusted average (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

WILLAMETTE WATERSHEDS

OREGON

Area 8

GENERAL OUTLOOK

February precipitation in the Willamette area was 63% of normal. Major reservoirs have much below average storage, with some reservoirs reporting no useable storage at all. Most will not fill. Snowpack water is ranging generally 12% to 19% of normal on the major drainages. Stream-flow this summer will be much below normal. The Middle Fork Willamette River below the North Fork at Oakridge had a February flow of only 19% of normal.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Clackamas at Estacada	350	52	Apr.-July		674
	442	56	Apr.-Sept.		789
Clackamas above Three Lynx	264	52	Apr.-July		507
	338	56	Apr.-Sept.		604
McKenzie at McKenzie Bridge	281	62	Apr.-July		454
	386	64	Apr.-Sept.		599
McKenzie near Vida	610	59	Apr.-July		1,035
	786	62	Apr.-Sept.		1,263
McKenzie, So. Fork near Rainbow	126	60	Apr.-July		210
	154	64	Apr.-Sept.		239
Oak Grove Fork above Power Intake	83	60	Apr.-July		123
	119	62	Apr.-Sept.		162
Row near Dorena	45	46	Apr.-July		98
	46	45	Apr.-Sept.		102
Santiam, North at Mehama	367	48	Apr.-July		765
	418	48	Apr.-Sept.		872
Santiam, South at Waterloo	248	44	Apr.-July		564
	279	46	Apr.-Sept.		607
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	285	42	Apr.-July	750	678
	358	46	Apr.-Sept.	868	779
Willamette, No. Fk. of Mid. Fk. near Oakridge	87	46	Apr.-July		189
	100	48	Apr.-Sept.		209
Willamette at Salem	2,638	60	Apr.-July		4,397
	2,867	58	Apr.-Sept.		4,943

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Clackamas River	2	11	16
McKenzie River	3	14	17
Row River	2	17	19
Santiam River	4	8	12
Willamette, Mid. Fk.	5	14	18

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Blue River	85.6*	8.4	33.9	--
Cottage Grove	30.0*	0.8	8.3	8.4
Cougar	155.2*	5.3	50.8	41.7
Detroit	299.9*	0.0	87.5	110.6
Dorena	70.5*	1.7	18.1	19.8
Fall Creek	115.0*	0.0	42.9	37.5
Fern Ridge	94.2*	6.7	48.6	36.3
Foster	30.0*	4.1	7.1	6.0
Green Peter	270.0*	0.0	109.8	109.7
Hills Creek	200.0*	0.0	47.6	--
Lookout Point	337.2*	0.0	79.7	59.9
Timothy Lake	61.7	44.3	90.2	97.3
Henry Hagg Lake	53.0	24.7	60.9	53.0

* Multiple purpose reservoir--space reserved primarily for flood runoff.

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

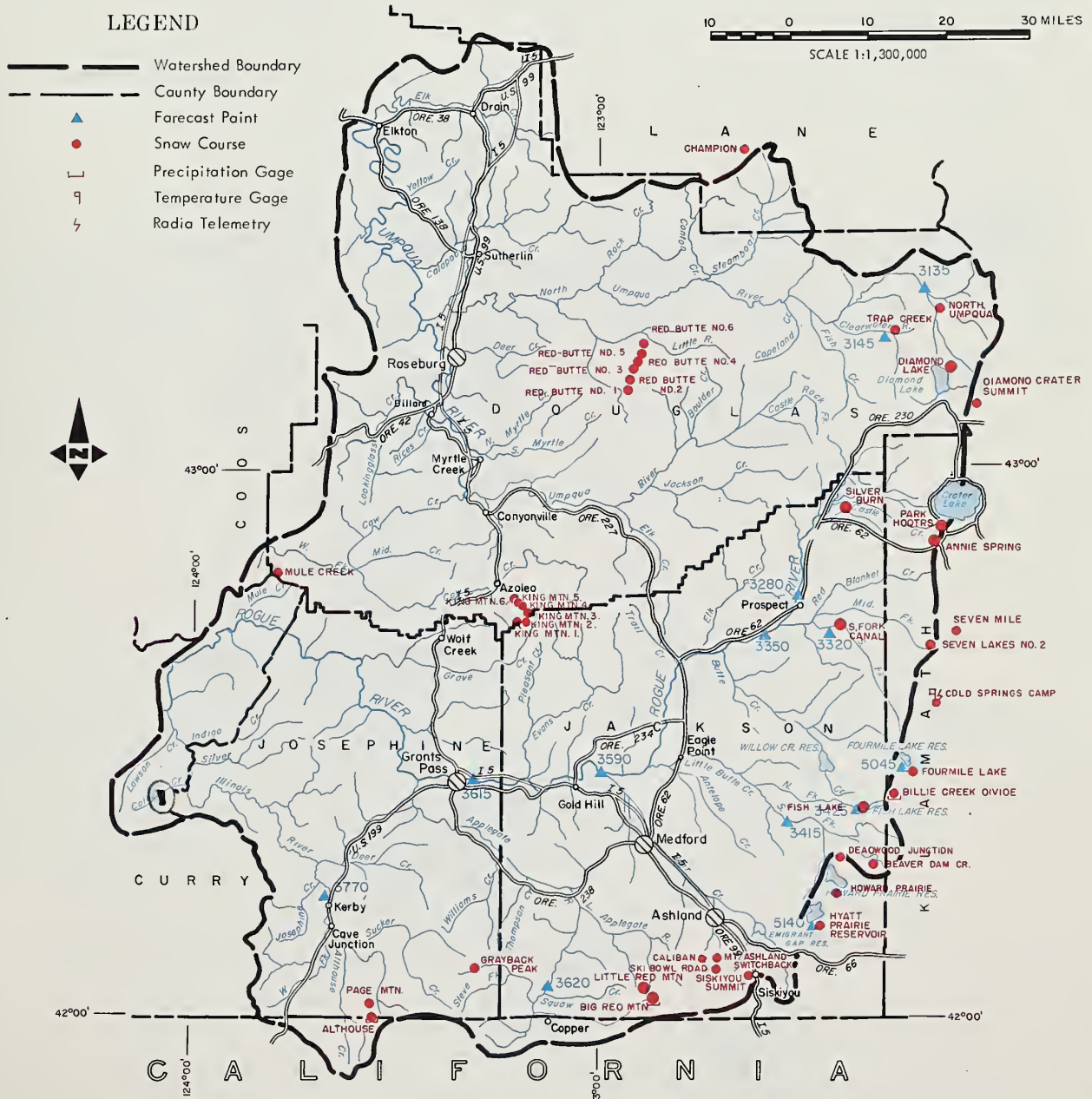
WATER SUPPLY OUTLOOK

ROGUE, UMPQUA, WATERSHEDS

OREGON

GENERAL OUTLOOK

This area received 55% of its normal February precipitation. Snowpack water is ranging from 17% to 34% of normal. Reservoir storage is generally near average, but streamflow forecasts are ranging from 40% to 65% of normal, which indicates local water shortages for some users. February flow on the Umpqua at Elkton was only 9% of normal. The February flow on the Rogue River at Raygold was 25% of normal.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Applegate near Copper	60	45	Apr.-Sept.		133
Clearwater above Trap Creek	48	70	Apr.-Sept.		69
Fourmile Lake net Inflow	1.7	40	Apr.-Sept.		4.3
Hyatt Reservoir net Inflow	1.7	37	Apr.-July		4.6
Illinois River near Kerby	118	62	Apr.-July		191
	122	62	Apr.-Sept.		197
Little Butte, N. Fk. at Fish Lake nr. Lake Cr.	5.6	41	Apr.-Sept.		13.7
Little Butte, S. Fk. near Lake Creek	14.4	51	Apr.-July		28
Rogue above Prospect	160	62	Apr.-July		256
	201	65	Apr.-Sept.		311
Rogue, South Fork near Prospect	37	61	Apr.-July		61
	43	60	Apr.-Sept.		72
Rogue at Raygold near Central Point	424	58	Apr.-July	779	735
	523	59	Apr.-Sept.	997	890
Rogue at Grants Pass	523	59	Apr.-Sept.		890
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	110	66	Apr.-Sept.		166

FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek, South Fork	100	Apr. 1	May 27

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Emigrant Lake	39.0	25.7	29.2	28.5*
Fish Lake	8.0	6.4	7.2	5.5
Fourmile Lake	16.1	9.8	14.4	8.7
Howard Prairie	60.0	35.9	51.7	35.9
Hyatt Prairie	16.1	10.2	13.6	11.3
* Average for years of record (in base period) after reconstruction.				

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Applegate	3	33	17
Bear Creek	2	25	18
Butte Creek	4	18	23
Illinois River	3	70	34
North Umpqua	3	11	18
Rogue River	4	15	20

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

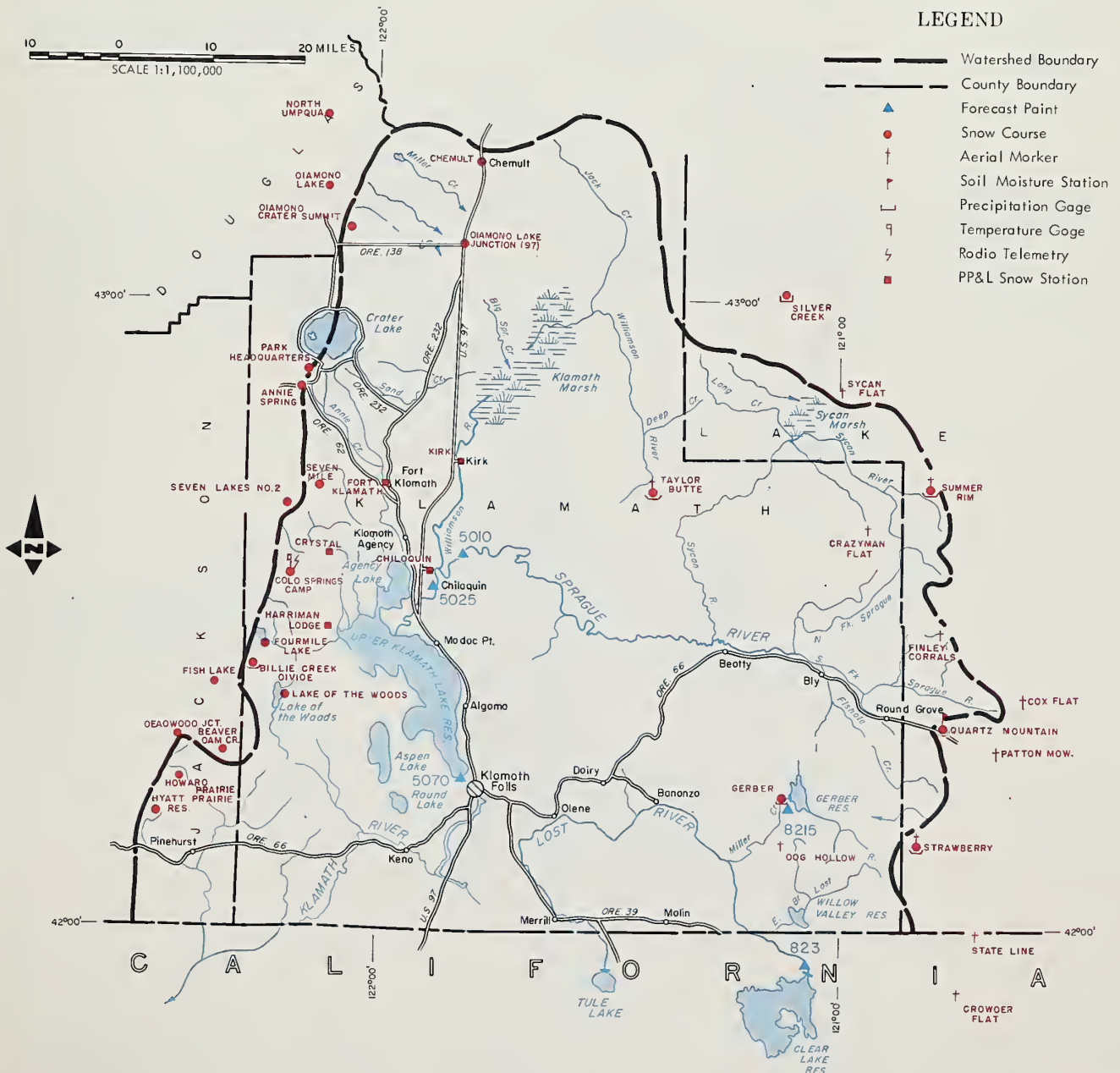
WATER SUPPLY OUTLOOK

KLAMATH WATERSHEDS

OREGON

GENERAL OUTLOOK

The Klamath area recorded only 31% of average February precipitation. Snowpack water is ranging from 10% to 20% of normal. Storage in Clear Lake, Gerber and Upper Klamath Lake reservoirs is below average. Inflow to Clear Lake and Gerber is forecast to be 8% to 10% of normal while Upper Klamath Lake is forecast at 40%. Net inflow to Klamath Lake in February was only 53% of normal. Users with access to water from Gerber reservoir and those dependent on direct diversion can expect water shortages.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Clear Lake Reservoir Inflow	6.7	10	Mar.-July		67
Gerber Reservoir Inflow	2.5	8	Mar.-July		31
Sprague near Chiloquin	95	35	Mar.-July		271
	73	30	Apr.-Sept.		242
Upper Klamath Lake net Inflow	290	40	Mar.-July	523	724
	225	42	Apr.-Sept.	499	536
Williamson below Sprague River	186	45	Apr.-Sept.		414

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c

Upper Klamath	1	75	70
---------------	---	----	----

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c

Clear Lake	440.2	210.6	287.7	227.1
Gerber	94.0	35.3	56.6	53.5
Upper Klamath Lake	584.0	374.1	354.5	422.6

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c

Lost River	4	20	19
Sprague River	3	16	13
Upper Klamath	7	13	14
Williamson River	3	10	11

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

WATER SUPPLY OUTLOOK

LAKE COUNTY, GOOSE LAKE WATERSHEDS

OREGON

GENERAL OUTLOOK

This area was driest in the state this past month, having recorded only 28% of normal February precipitation. Snowpack water is 10% to 19% of average. Reservoirs are reporting below average storage. Streamflow forecasts range from only 9% to 28% of average. The Chewaucan River at Paisley had a discharge 29% of normal for February. Water users can expect below normal supplies.



STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Chewaucan near Paisley	12.0	14	Mar.-July	67	87
Deep above Adel	22	28	Mar.-July		78
Drews Reservoir net Inflow	6.8	16	Mar.-July		41
Honey Creek near Plush	4.0	20	Mar.-July		20
Silver Creek near Silver Lake	1.3	9	Apr.-July		13.7
Twentymile near Adel	4.8	18	Mar.-July		26

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Chewaucan, Silver Creek, Drew Creek	1	75	70
Honey, Deep, 20-Mi. Cr.	1	108	90

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average ^c
Cottonwood	8.7	1.4	--	4.0*
Drews	63.0	21.5	36.8	39.8
Thompson Valley	19.5	22.5	12.8	--

* Average for years of record (in base period) after reconstruction.

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Chewaucan River	3	18	15
Deep Creek	3	21	16
Drew Creek	3	9	10
Honey Creek	3	18	16
Silver Creek	3	14	10
Twentymile Creek	3	17	19

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

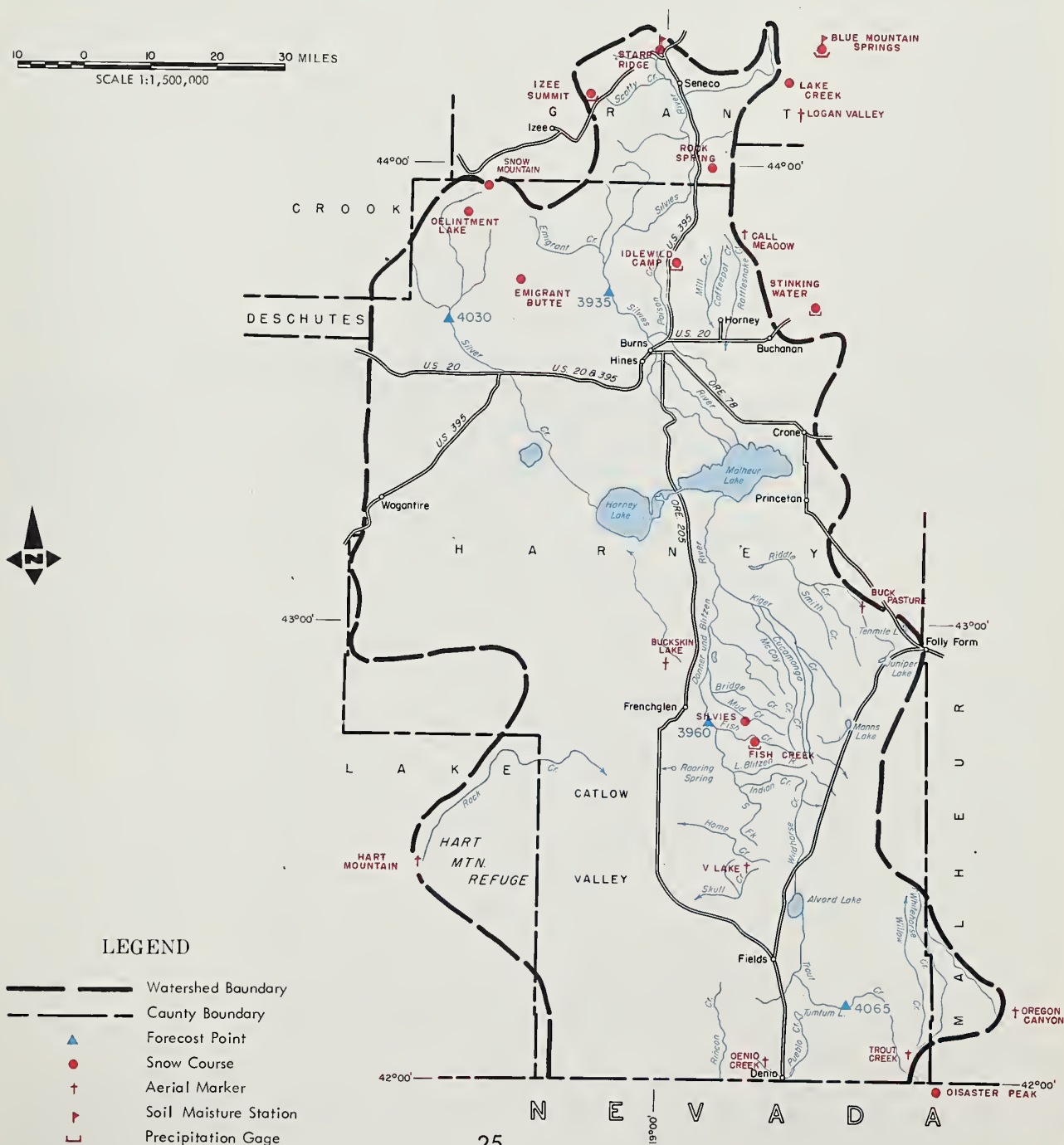
WATER SUPPLY OUTLOOK

HARNEY BASIN WATERSHEDS

OREGON

GENERAL OUTLOOK

Harney Basin received 34% of normal February precipitation. Water equivalent of the snowpack ranged from 13% to 26% of normal. Streamflow is forecast to range from 19% to 59% of average. The Silvies River near Burns had a February flow only 14% of average. Water users can expect much below normal supplies.



STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average ^c
Donner und Blitzen near Frenchglen	33	59	Mar.-July		55
	31	58	Apr.-Sept.		53
Silver near Riley	3.0	19	Apr.-July		15.6
Silvies River near Burns	18.8	20	Mar.-July		94
	14.8	20	Apr.-Sept.		74
Trout Creek near Denio	2.0	22	Mar.-July		8.4
	1.6	20	Apr.-Sept.		7.9

SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average ^c
Silvies River, Silver Cr.	1	75	82

SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average ^c
Donner und Blitzen R.	4	26	31
Silver Creek	3	15	17
Silvies River	4	13	15
Trout Creek	3	23	25

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 1

MARCH 1, 1977

SNOW

DRAINAGE BASIN and or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr. Ave. C	

OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	2/26	2	0.2	--	6.1
Battle Creek (Ida.)***	3/4	T	0.1	3.4	2.9
Bear Creek (Nev.)	3/5	38	8.6	18.8	17.3
Big Bend (Nev.)	2/23	8	0.8	8.4	7.6
Blue Mountain Springs ^{aa}	2/25	14	2.3	14.0	14.1
Blue Mtn. Springs Pillow*	2/25	--	2.6	--	--
Buck Pasture***	3/4	1	0.1	4.0	2.1
Buckskin, Lower (Nev.)	2/24	4	0.7	6.4	7.4
Buckskin, Upper (Nev.)	2/24	4	0.4	8.1	8.7
Bull Basin (Ida.)***	3/4	2	0.2	1.7	1.1
Bully Creek***	3/4	T	0.1	2.8	2.5
Call Meadow***	3/4	3	0.3	3.4	4.0
Columbia Basin (Nev.)***	2/28	6	0.8	9.0	8.1
Cottonwood-Indian***	3/4	0	0.0	0.1	0.8
Disaster Peak (Nev.)	2/24	10	1.8	8.4	13.4
Eldorado Pass ^{aa}	2/28	3	0.8	4.1	2.8
Fawn Creek (Nev.)	2/28	6	1.1	7.2	4.4 ^b
Fish Creek	3/1	40	6.7	--	21.1
Fish Creek***	3/4	36	5.4	24.8	19.1
Fish Creek Pillow*	No Report	--	--	--	--
Flag Prairie***	3/4	T	0.1	9.6	4.2
Fox Creek (Nev.)	3/5	21	4.8	--	9.0
Fry Canyon (Nev.)	2/23	6	0.8	7.5	6.3
Gold Creek (Nev.)	2/23	8	0.7	6.3	4.9
Granite Peak (Nev.)	2/24	16	3.5	11.1	13.2
Hyde Pasture (Ida.)***	3/4	4	0.4	3.4	4.9
Jack Creek, Lower (Nev.)	2/23	7	0.5	6.2	--
Jack Creek, Upper (Nev.)	2/23	12	2.2	9.6	7.7
Jack Peak (Nev.)	2/23	28	6.2	20.6	--
Lake Creek R.S. ^{aa}	2/25	7	0.5	8.8	9.1
Laurel Draw (Nev.)***	2/23	11	2.1	7.8	6.4 ^b
Logan Valley***	3/4	10	1.5	9.5	7.4 ^b
Lookout Butte***	3/4	0	0.0	0.0	0.2
Louse Canyon***	3/4	3	0.3	3.4	2.8
Martin Creek (Nev.)	2/24	11	2.3	4.1	8.9
Merritt Mountain (Nev.)***	2/28	11	2.0	6.6	5.8 ^b
Midas (Nev.)	2/28	T	0.1	1.6	3.3
Mud Flat (Ida.)	2/26	2	0.4	--	5.4
Oregon Canyon***	3/4	4	0.4	4.2	4.8
Quinn Ridge (Nev.)***	3/4	T	0.1	1.4	1.8
Red Canyon (Ida.)***	3/4	12	2.4	5.6	5.9
Rock Spring ^{aa}	2/25	5	0.6	6.3	4.9
Rodeo Flat (Nev.)	2/23	5	0.7	5.5	4.9
76 Creek (Nev.)***	3/5	18	4.3	9.9	10.0
Silver City (Ida.)	2/28	16	3.5	13.2	13.8
Silver City (Ida.)***	3/4	16	3.2	12.0	--
Silvies	2/28	11	4.0	--	9.9
Silvies***	3/4	20	4.2	8.9	7.7
Silvies Pillow*	2/28	--	9.7	--	--
South Mountain #2 (Ida.)	3/1	12	2.6	10.8	11.3
Stag Mountain (Nev.)***	2/28	6	0.8	3.0	5.0 ^b
Stinking Water	2/28	0	0.0	4.2	1.9 ^b
Succor Creek (Ida.)***	3/4	12	2.4	5.9	5.4
Taylor Canyon (Nev.)	2/23	4	0.6	2.5	4.1
Toe Jam (Nev.)***	2/28	T	0.1	7.2	7.9 ^b
Tremewan Ranch (Nev.)	2/25	2	0.4	1.2	1.2
Triangle (Ida.)***	3/4	T	0.1	0.3	--
Trout Creek***	3/4	12	2.4	7.2	6.4
"V" Lake	3/4	8	1.2	6.9	4.9
Vaught Ranch (Ida.)***	3/4	T	0.1	3.6	3.3
War Eagle (Ida.)***	3/4	36	5.4	19.3	22.1

SNOW

DRAINAGE BASIN and or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr. Ave. C	

BURNT, POWDER, PINE, GRANDE RONDE, INNAHA WATERSHEDS					
Aneroid Lake #1	2/24	25	4.0	25.8	31.4
Aneroid Lake #2	2/24	21	3.4	24.6	27.9
Anthony Lake	2/24	25	4.8	23.7	22.4
Bald Mountain (Ore.)***	3/4	36	7.2	23.0	20.1
Beaver Reservoir	2/25	16	2.5	10.6	11.0
Big Sheep***	3/4	33	6.6	21.1	23.1
Blue Mtn. Summit ^{aa}	2/25	--	1.4 ^a	8.9	7.7
Bourne ^{aa}	2/25	7	1.0	14.7	14.1
Bourne Pillow	No Report	--	--	--	--
County Line	2/25	8	1.1	6.3	4.5
Dooley Mountain	2/25	6	1.6	6.4	8.1
Eilertson Meadows ^{aa}	2/25	6	0.5	10.5	10.1
Eldorado Pass ^{aa}	2/28	3	0.8	4.1	2.8
Gold Center ^{aa}	2/25	--	2.5 ^a	12.0	11.7
Goodrich Lake ^{aa}	2/25	22	4.2	39.2	35.4 ^b
Little Alps	2/24	14	2.6	10.4	11.8 ^b
Little Antone	2/24	4	1.1	7.0	7.2
Little Antone Alternate	2/24	7	2.4	8.2	--
Lucky Strike ^{aa}	3/4	38	7.3	10.2	11.0
Lucky Strike Pillow*	No Report	--	--	7.7	--
Meacham	2/25	9	1.5	12.1	8.1
Mirror Lake***	3/4	57	11.4	66.8	59.0
Moss Spring	3/4	40	8.2	23.6	19.9
Schneider Meadow ^{aa}	3/4	26	4.6	26.0	27.3
Schoolmarm	2/25	--	0.9 ^a	5.2	3.7
Standley***	3/4	35	6.3	26.6	25.6
Taylor Green	3/4	27	4.8	15.4	14.7 ^b
Tipton ^{aa}	2/25	6	1.2	10.9	9.4
Tipton Snow Pillow*	2/25	--	2.6	15.3	--
Tollgate ^{aa}	2/25	16	3.1	29.8	21.4
TV Ridge***	3/4	18	3.2	19.2	18.2
West Eagle Meadows	3/4	59	11.8	23.7	--

^{aa}This station has been shortened to 5 sample points. The data is equivalent to previous measurements.

UMATILLA, WALLA WALLA, WILLOW, ROCK LOWER JOHN DAY WATERSHEDS

Arbuckle Mountain ^{aa}	3/4	29	4.8	7.9	9.2
Arbuckle Mountain Pillow*	3/4	--	6.7	18.7	--
Blue Mountain Camp	2/25	9	1.0	20.8	12.6
Bowman Springs	2/28	15	3.0	--	--
Bowman Springs Pillow	2/28	--	3.7	--	--
Butte Creek Summit	3/4	11	1.6	0.0	--
Emigrant Springs ^{aa}	2/26	8	1.2	6.8	4.0
High Ridge Pillow*	2/28	38	8.9	34.8	--
Lucky Strike ^{aa}	3/4	38	7.3	10.2	11.0
Lucky Strike Pillow*	No Report	--	--	7.7	--
Meacham ^{aa}	2/25	9	1.5	12.1	8.1
Tollgate ^{aa}	2/25	16	3.1	29.8	21.4

^{aa}This station has been shortened to 5 sample points. The data is equivalent to previous measurements.

^{aa}This station has been shortened to 5 sample points. The data is equivalent to previous measurements.

BASIC DATA SUPPLEMENT 1

MARCH 1, 1977

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr. Ave. C	

UPPER JOHN DAY WATERSHEDS					
Anthony Lake	2/24	25	4.8	23.7	22.4
Arbuckle Mountain ^{aa}	3/4	29	4.8	7.9	9.2
Arbuckle Mt. Pillow*	3/4	--	6.7	18.7	--
Blue Mountain Springs ^{aa}	2/25	14	2.3	14.0	14.1
Blue Mt. Springs Pillow*	2/25	--	2.6	--	--
Blue Mountain Summit ^{aa}	2/25	--	1.4 ^a	8.9	7.7
Butte Creek Summit	3/4	11	1.6	0.0	--
Derr	2/25	7	1.0	6.4	8.5
Gold Center ^{aa}	2/25	--	2.5	12.0	11.7
Indian Creek Butte***	3/4	21	4.2	18.5	20.8
Izee Summit ^{aa}	2/25	8	1.2	7.8	7.0
Lucky Strike ^{aa}	3/4	38	7.3	10.2	11.0
Lucky Strike Pillow*	No Report			7.7	--
Marks Creek	2/28	T	0.1	4.4	2.9
Ochoco Meadows	2/28	7	1.5	10.9	8.1
Olive Lake ^{aa}	2/25	21	4.2	17.3	17.6 ^b
Schoolmarm	2/25	--	0.9 ^a	5.2	3.7
Snow Mountain	2/25	--	3.6 ^a	12.2	11.9 ^b
Snow Mt. Pillow**	2/28	--	2.2	--	--
Starr Ridge ^{aa}	2/25	5	0.7	6.7	4.9
Tipton ^{aa}	2/25	6	1.2	10.9	9.4
Tipton Snow Pillow*	2/25	--	2.6	15.3	--

^{aa}This station has been shortened to 5 sample points. The data is equivalent to previous measurements.

UPPER DESCHUTES, CROOKED WATERSHEDS

Bald Peter	2/28	20	4.2	28.2	--
Caldwell Ranch	2/25	--	1.2 ^a	12.0	8.6 ^b
Cascade Summit	2/28	20	4.5	31.6	23.6
Chemult	2/25	3	0.6	5.9	8.9
Chemult Alternate	2/25	4	0.6	7.2	--
Derr	2/25	7	1.0	6.4	8.5
Hogg Pass	2/25	20	3.6	43.0	33.2
Hungry Flat	2/28	T	0.1	4.4	4.6
Irish-Taylor Pillow**	No Report			42.5	32.6 ^b
Lionshead***	3/2	14	2.8	14.6	--
Marks Creek	2/28	T	0.1	4.4	2.9
New Crescent Lake	2/25	8	1.0	16.0	11.8
New Dutchman Flat #2	2/28	25	5.9	52.1	43.4
Ochoco Meadows	2/28	7	1.5	10.9	8.1
Racing Creek	2/28	5	1.0	17.0	--
Snow Mountain	2/25	--	3.6 ^a	12.2	11.9 ^b
Snow Mountain Pillow**	2/28	--	2.2	--	--
Summit Lake	2/25	34	5.0	41.8	32.6 ^b
Summit Lake Pillow**	2/25	--	5.0	--	--
Tamarack	2/25	2	0.4	5.8	4.5
Tangent	2/28	9	2.2	20.4	20.0
Three Creek Butte	2/24	7	0.9	10.4	9.0
Three Creek Meadow	2/24	7	1.0	16.5	15.6
Three Creek Mdw. Pillow**	No Report			20.5	--
Waldo Lake	2/28	--	5.6 ^a	32.6	23.3 ^b
Whitewater Meadow	3/2	10	2.0	7.3	--

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr. Ave. C	

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS					
Brooks Meadows	2/28	5	1.8	9.0	9.6 ^b
Clear Lake	2/24	3	0.9	12.0	7.8
Clear Lake (Experimental)	2/24	6	1.8	21.4	12.3
Greenpoint	2/24	9	1.2	13.4	13.6
Greenpoint Pillow	No Report			--	--
Knebal Springs	2/28	--	1.3 ^a	6.5	6.7 ^b
Mt. Hood Test Site	2/25	39	10.1	63.7	52.3
Mud Ridge	2/25	16	4.8	40.8	--
Mud Ridge Pillow	No Report			--	--
Red Hill	2/24	--	9.8 ^a	22.5	31.6
Red Hill Pillow	e			--	--
Still Creek	2/25	10	2.8	28.2	18.3
Switchback	2/24	12	1.7	10.0	10.7 ^b
Tilly Jane	2/26	14	3.2	30.1	33.7
Ulrich Ranch Junction	2/28	--	0.3 ^a	3.9	3.6 ^b
Umbrella Falls	2/28	54	13.7	45.4	56.7
WILLAMETTE WATERSHEDS					
Cascade Summit	2/28	20	4.5	31.6	23.6
Champion	2/25	21	3.8	30.2	23.2 ^b
Champion Pillow	No Report			--	--
Clackamas Lake	3/1	17	1.8	13.7	10.3
Clear Lake	2/24	3	0.9	12.0	7.8
Clear Lake (Experimental)	2/24	6	1.8	21.4	12.3
Dead Horse Grade	2/24	10	1.5	12.2	13.5
Detroit (Town)	2/24	0	0.0	0.4	0.9
Detroit Dam	2/24	0	0.0	0.1	0.5
Golden Curry Creek	2/25	8	1.5	0.4	5.2
Hogg Pass	2/25	20	3.6	43.0	33.2
Lake Harriet	No Report			0.1	2.3
Laurel Mountain	2/28	6	1.6	12.0	--
Layng Creek	2/25	0	0.0	0.0	0.1
Lookout Point Dam	2/28	0	0.0	0.0	0.0
Lost Creek Ranch	2/24	0	0.0	0.0	3.6
Lund Park	2/25	0	0.0	0.0	0.5
Marion Forks	2/25	10	2.2	17.0	10.8 ^b
Marys Peak	2/24	21	4.0	8.8	10.0
McCredie Springs	2/28	0	0.0	0.0	0.4
McKenzie	2/24	31	6.6	48.3	36.2
McKenzie Bridge	2/24	0	0.0	0.0	0.0
Mill City	2/24	0	0.0	0.0	0.1
Mt. Hood Test Site	2/25	39	10.1	63.7	52.3
Mud Ridge	2/25	16	4.8	40.8	--
Mud Ridge Pillow	No Report			--	--
Oakridge	2/28	0	0.0	--	0.0
Peavine Ridge Pillow**	3/1	--	2.4 ^a	18.3	13.1 ^b
Railroad Overpass	2/28	0	0.0	0.0	1.9
Saddle Mountain Pillow**	2/28	--	1.1	11.3	--
Salt Creek Falls	2/28	9	1.4	13.9	12.3
Santiam Junction	2/25	16	2.1	29.8	19.2
Santiam Junction Pillow	No Report			--	--
Seine Creek Pillow**	No Report			--	2.4
Still Creek	2/25	10	2.8	28.2	18.3
Summit Lake	2/25	34	5.0	41.8	32.6 ^b
Summit Lake Pillow**	2/25	--	5.0	--	--
Timothy Lake	2/28	8	1.5	13.3	12.8
Valsetz Summit	2/28	T	0.1	5.2	--
Vida	2/24	0	0.0	0.0	0.1
Waldo Lake	2/28	--	5.6 ^a	32.6	23.3 ^b
White Branch Slide	2/24	6	1.4	6.3	5.6
Weaver Creek	2/25	0	0.0	0.0	0.7
Whitewater Bridge	2/24	T	0.1	7.6	3.9

BASIC DATA SUPPLEMENT 1

MARCH 1, 1977

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont (In.)	Water Content (inches)	
				Last Yr.	Ave. C
ROGUE, UMPQUA WATERSHEDS					
Althouse	2/25	21	4.4	2.8	6.5
Annie Spring	2/28	26	7.6	41.4	36.3
Beaver Dam Creek	2/28	14	2.5	15.6	11.5
Big Red Mountain	2/23	26	4.8	12.6	26.4
Billie Creek Divide	2/28	19	3.5	22.4	17.9
Billie Creek Divide Pillow	2/28	--	1.2	--	--
Caliban	2/24	26	4.2	20.0	29.5
Caliban (Alternate)	2/24	23	4.0	19.8	--
Champion	2/25	21	3.8	30.2	23.2
Champion Pillow	No Report		--	--	--
Cold Springs Camp	2/28	37	7.9	33.4	28.2
Deadwood Junction	2/28	12	2.5	10.8	8.1
Diamond-Crater Summit	2/24	22	4.3	34.4	25.8
Diamond Lake	2/24	11	2.3	24.9	17.2
Fish Lake	2/28	--	3.0 ^a	15.2	11.5
Fourmile Lake	2/28	--	4.5 ^a	24.1	21.3
Fourmile Lake Pillow		e	--	--	--
Grayback Peak	2/22	20	3.7	13.3	22.7
Howard Prairie Reservoir	2/28	11	2.7	9.0	7.8
Hyatt Prairie	2/28	8	2.1	7.1	7.0
King Mountain #1	2/25	15	2.8	3.8	8.1
King Mountain #2	2/25	12	2.0	2.4	5.8
King Mountain #3	2/25	7	1.2	0.0	1.9
King Mountain #4	2/25	0	0.0	0.0	0.0
King Mountain #5	2/25	0	0.0	0.0	0.0
King Mountain #6	2/25	0	0.0	0.0	0.0
Little Red Mountain	2/25	19	3.6	10.4	21.6
Mt. Ashland Switchback	2/24	26	4.8	21.3	28.2
Mule Creek	2/25	22	4.3	2.0	--
North Umpqua	2/28	10	2.5	19.5	11.5
Page Mountain	2/25	17	3.1	0.0	3.6
Park Headquarters	2/28	47	10.7	50.9	48.6
Red Butte #1	2/23	13	1.8	12.0	11.0
Red Butte #2	2/23	14	1.5	4.4	7.2
Red Butte #3	2/23	10	0.5	2.5	5.7
Red Butte #4	2/23	3	0.4	0.0	2.4
Red Butte #5	2/23	0	0.0	0.0	0.5
Red Butte #6	2/23	0	0.0	0.0	0.2
Seven Mile	3/7	37	10.1	31.7	--
Seven Mile Pillow	3/7	--	8.4	--	--
Silver Burn	2/28	11	1.0	17.2	10.9
Siskiyou Summit	2/28	6	1.3	3.2	6.3
Ski Bowl Road	2/24	26	4.8	18.8	24.0
South Fork Canal	3/1	5	0.5 ^a	0.0	2.0
Trap Creek	2/28	9	2.0	14.8	9.2

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. C
KLAMATH WATERSHEDS					
Annie Spring	2/28	26	7.6	41.4	36.3
Billie Creek Divide	2/28	19	3.5	22.4	17.9
Billie Creek Divide Pillow	2/28	--	1.2	--	--
Chemult	2/25	3	0.6	5.9	8.9
Chemult (Alternate)	2/25	4	0.6	7.2	--
Chiloquin (PP&L)	No Report		--	--	1.0
Cold Springs Camp	2/28	37	7.9	33.4	28.2
Crazyman Flat***	2/24	4	0.7	7.3	8.5
Crowder Flat (Calif.)	2/24	2	0.2	1.2	2.1
Crystal (PP&L)	No Report		--	6.8	7.2
Diamond-Crater Summit	2/24	22	4.3	34.4	25.8 ^b
Diamond Lake Junction (97)		e	--	3.3	5.6 ^b
Dog Hollow***	2/24	T	0.1	0.4	0.5
Finley Corrals***	2/24	11	2.2	18.6	14.2
Fort Klamath (PP&L)	No Report		--	--	2.9
Fourmile Lake	2/28	--	4.5 ^a	24.1	21.3 ^b
Fourmile Lake Pillow		e	--	--	--
Gerber	2/28	2	0.4	3.0	1.9 ^b
Harriman (PP&L)	2/28	8	0.9	3.5	3.3
Howard Prairie	2/28	11	2.7	9.0	7.8 ^b
Hyatt Prairie Reservoir	2/28	8	2.1	7.1	7.0
Kirk (PP&L)	No Report		--	3.2	5.2
Park Headquarters	2/28	47	10.7	50.9	48.6
Quartz Mountain	2/25	4	0.3	5.7	5.6
Seven Mile	3/7	37	10.1	31.7	--
Seven Mile Pillow	3/7	--	8.4	--	--
State Line (Calif.)***	2/24	5	0.5	9.9	7.5
Strawberry	2/20	3	0.8	9.6	6.5
Strawberry***	No Report		--	9.6	6.4 ^b
Summer Rim***	2/24	9	1.6	9.9	13.2
Summer Rim	2/28	14	2.5	11.3	14.5
Summer Rim Pillow*	2/24	--	1.0	14.0	--
Sycan Flat***	2/24	2	0.4	4.2	6.2
Taylor Butte	3/2	4	0.7	3.4	4.4
Taylor Butte Pillow	3/2	--	0.4	--	--
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	2/28	7	1.5	3.9	10.9
Bald Mountain (Nev.)	2/24	4	0.4	0.5	3.4
Bear Flat Meadow***	2/24	6	0.6	4.8	9.1
Camas Creek	2/25	4	1.1	7.8	9.2
Cedar Pass (Calif.)	2/22	12	3.0	11.6	13.1
Colvin Creek***	2/24	4	0.4	2.6	4.6
Cox Flat***	2/24	3	0.3	6.6	6.8
Crowder Flat (Calif.)***	2/24	2	0.2	1.2	2.1
Dismal Swamp (Calif.)***	2/24	15	3.0	19.1	14.1
Finley Corrals***	2/24	11	2.2	18.6	14.2
Hart Mountain***	2/24	2	0.2	0.6	1.5
Little Bally Mtn. (Nev.)***	2/24	6	0.6	3.0	2.3
Mt. Bidwell (Calif.)	2/24	14	3.4	--	--
North Star (Calif.)	2/24	16	3.9	--	--
Patton Meadows***	2/24	9	1.8	16.8	15.0
Quartz Mountain	2/25	4	0.3	5.7	5.6
Sherman Valley***	2/24	12	2.4	11.2	10.5
Silver Creek	2/25	1	0.3	1.0	2.1
State Line (Calif.)***	2/24	5	0.5	9.9	7.5
Strawberry	2/20	3	0.8	6.4	6.5
Strawberry***	No Report		--	5.1	6.4 ^b
Summer Rim	2/28	14	2.5	11.3	14.5
Summer Rim***	2/24	9	1.6	9.9	13.2
Summer Rim Pillow*	2/24	--	1.0	14.0	--
Sycan Flat***	2/24	2	0.4	4.2	6.2
Rogger Meadows	2/24	9	1.8	13.9	--

BASIC DATA SUPPLEMENT 1

MARCH 1, 1977

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (in.)	Water Cont (in.)	Water Content (inches) Last Yr. Ave. C	

SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (in.)	Water Cont. (in.)	Water Content (inches) Last Yr. Ave. C	

HARNEY BASIN WATERSHEDS

Blue Mountain Springs ^{aa}	2/25	14	2.3	14.0	14.1
Blue Mtn. Springs Pillow*	2/25	--	2.6	--	--
Buck Pasture***	3/4	1	0.1	4.0	2.1
Buckskin Lake***	No Report			0.0	0.3
Call Meadows***	3/4	3	0.3	3.4	4.0
Delintment Lake	2/25	--	0.6 ^a	8.1	6.6 ^b
Denio Creek***	3/4	1	0.1	1.3	0.5
Disaster Peak (Nev.)	2/24	10	1.8	8.4	13.4
Emigrant Butte	No Report			5.0	3.9 ^b
Fish Creek	3/1	40	6.7	--	21.1 ^b
Fish Creek Pillow*	No Report			--	--
Fish Creek***	3/4	36	5.4	24.8	19.1
Hart Mountain***	2/24	2	0.2	0.6	1.5
Idlewild Camp Alternate	No Report			3.2	--
Izee Summit ^{aa}	2/25	8	1.2	7.8	7.0
Lake Creek R.S. ^{aa}	2/25	7	0.5	8.8	9.1
Lake Cr. R. S. Pillow	No Report			--	--
Oregon Canyon***	3/4	4	0.4	4.2	4.8
Rock Spring ^{aa}	2/25	5	0.6	6.3	4.9
Silvies	2/28	11	4.2	--	9.9 ^b
Silvies Pillow*	2/28	--	9.7	--	--
Silvies***	3/4	20	4.2	8.9	7.7
Snow Mountain	2/25	--	3.6 ^a	12.2	11.9 ^b
Snow Mountain Pillow**	2/28	--	2.2	--	--
Starr Ridge ^{aa}	2/25	5	0.7	6.7	4.9
Stinking Water	2/28	0	0.0	4.2	1.9 ^b
Trout Creek***	3/4	12	2.4	7.2	6.4
"V" Lake	3/4	8	1.2	6.9	4.9

^{aa}This station has been shortened to 5 sample points. The data is equivalent to previous measurements.

LOWER COLUMBIA WATERSHED

Blazed Alder***	2/28	--	3.1	--	--
Mt. Hood Test Site	2/25	39	10.1	63.7	52.3
Mud Ridge	2/25	16	4.8	40.8	--
Mud Ridge Pillow	No Report			--	--
North Fork Reservoir**	No Report			--	--
Still Creek	2/25	10	2.8	28.2	18.3

T Trace
* Manometer reading.
** Telemetry reading.
*** Aerial reading.

(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 2

MARCH 1, 1977

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average c
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	NO REPORT		10.8	11.5
Big Bend (Nev.)	6700	48	16.7	NO REPORT		15.2	15.0
Blue Mountain Spring	5900	42	16.9	2/25	5.9	---	10.0
Mud Flat (Ida.)	5500	48	12.8	NO REPORT		---	12.4
Rodeo Flat (Nev.)	6800	42	11.0	2/23	4.2	4.1	9.0
Taylor Canyon (Nev.)	6200	48	15.1	2/23	9.2	8.9	12.5
BURNT, POWDER, PINE, GRANDE RONDE, INNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8		e	---	11.0
Dooley Mountain	5430	36	9.2	2/25	2.5	4.7	4.1
Emigrant Springs	3925	48	22.3	2/25	15.0	19.6	20.4
Ladd Summit	3730	48	18.9	2/24	9.3	10.3	11.2
Moss Springs	5850	36	25.8	3/4	13.5	13.9	15.0
Tollgate	5070	48	23.6	2/25	14.5	16.8	19.3
UMATILLA, WALLA WALLA, WILLOW ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/28	9.6	13.6	13.1
Emigrant Springs	3925	48	22.3	2/25	15.0	19.6	20.4
Tollgate	5070	48	23.6	2/25	14.5	16.8	19.3
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/28	9.6	13.6	13.1
Blue Mountain Spring	5900	42	16.9	2/25	5.9	---	10.0
Blue Mountain Summit	5100	36	16.8		e	---	11.0
Derr	5670	24	9.0	2/25	4.9	8.9	8.3
Marks Creek	4540	36	14.1	2/28	9.8	10.1	11.8
Snow Mountain	6300	48	16.7	NO REPORT		13.9	13.7
Starr Ridge	5150	36	10.6	2/25	8.0	10.6	9.8
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	2/25	4.9	8.9	8.3
Marks Creek	4540	36	14.1	2/28	9.8	10.1	11.8
Snow Mountain	6300	48	16.7	NO REPORT		13.9	13.7
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	2/25	6.0	8.0	8.6

BASIC DATA SUPPLEMENT 2

MARCH 1, 1977

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average c
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	2/25	11.2	10.4	12.5
Quartz Mountain	5230	48	15.3	2/25	6.0	8.0	8.6
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	2/25	5.9	---	10.0
Silvies	6900	48	16.4	NO REPORT		---	13.4
Snow Mountain	6300	48	16.7	NO REPORT		13.9	13.7
Starr Ridge	5150	36	10.6	2/25	8.0	10.6	9.8
Willow-Bald	5000	24	6.6	NO REPORT		5.2	5.3

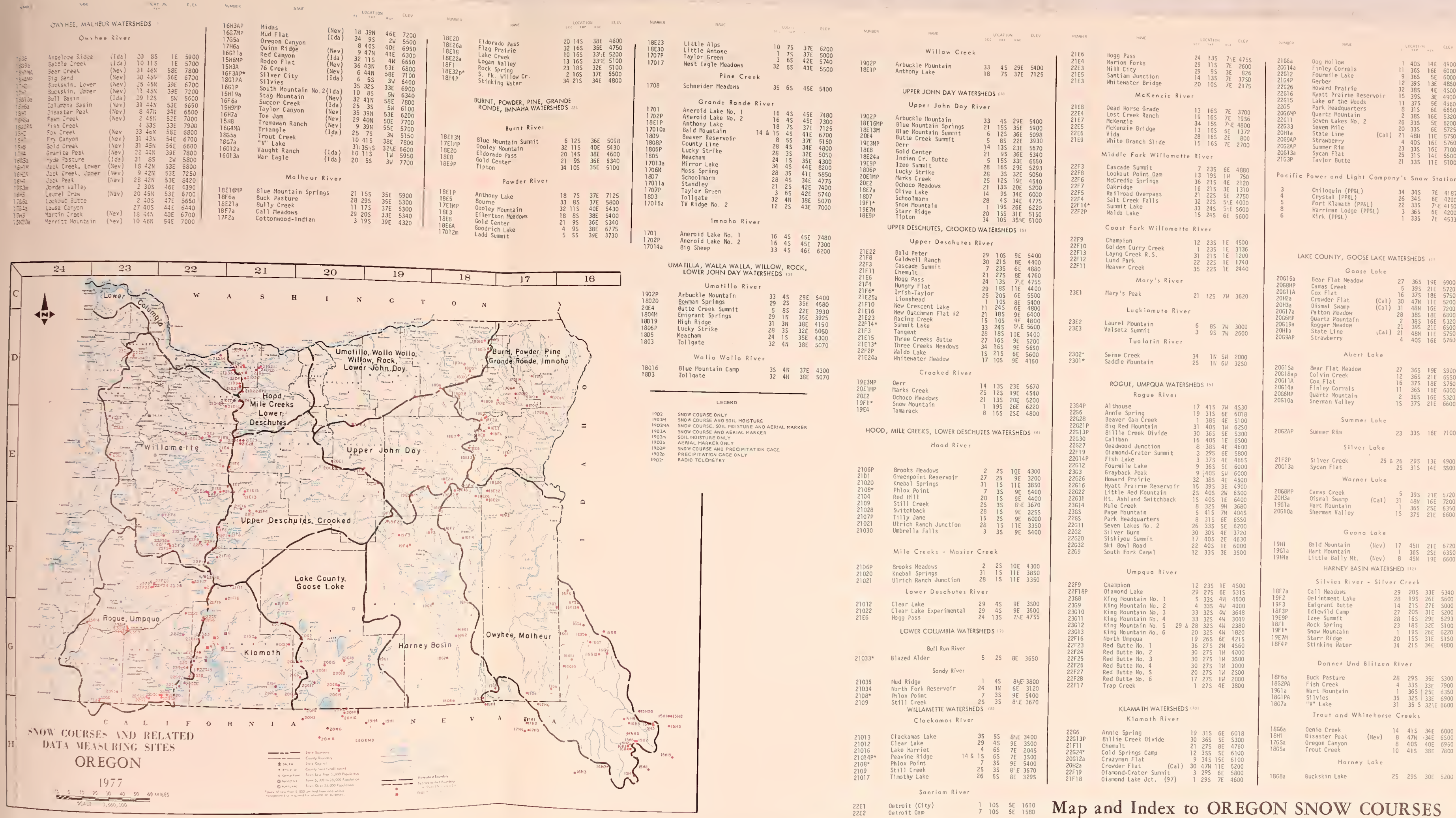
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

BASIC DATA SUPPLEMENT 3

MARCH 1, 1977

PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average ^c
Arbuckle Mountain (Morrow County)	5400	From 1/27 To 3/4	5.62		
Big Red Mountain (Jackson County)	6240	From 1/24 To 2/23	5.00		
Billie Creek Divide (Jackson County)	5400	From 1/28 To 2/28	3.00		
Blue Mt. Springs (Grant County)	5900	From 1/31 To 2/25	1.72		
Camas Creek (Lake County)	5825	From 1/28 To 2/25	0.60		
County Line (Umatilla County--Starkey Hdqs.)	4800	From 1/28 To 2/25	1.00		
Fish Creek (Harney County)	7600	From To 3/1	13.08		
Fish Lake (Jackson County)	4865	From 1/28 To 2/27	1.70		
Lucky Strike (Umatilla County)	5050	From 2/28 To 3/4	5.56		
Marks Creek (Crook-Wheeler Cos.)	4540	From 2/2 To 2/28	0.90		
Mt. Hood Test Site (Clackamas County)	5555	From 12/2 To 2/25	21.88		
Mud Ridge (Clackamas County)	3800	From 1/28 To 2/25	0.84		
Quartz Mt. Summit (Lake County)	6300	From 1/28 To 2/25	0.60		
Saddle Mountain (Washington County)	3250	From 1/27 To 2/28	7.50		
Seine Creek (Washington County)	2150	From 1/31 To 2/28	7.20		
Silver Creek (Lake County)	4900	From 12/28 To 2/25	0.70		
Strawberry (Lake County)	5760	From 1/30 To 2/20	0.00		
Summer Rim (Lake County)	7200	From To 2/24	6.91		
Taylor Butte (Klamath County)	5040	From 1/31 To 3/2	1.08		
Tipton (Baker County)	5100	From 1/28 To 2/25	0.60		
(a) Estimated. (b) 1958-72 adjusted average. (c) 1958-72, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.					



Map and Index to OREGON SNOW COURSES

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon Department Of Water Resources
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - NOAA, National Weather Service
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale - Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1220 S.W. THIRD AVE.
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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

*"The Conservation of Water begins
with the Snow Survey"*

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